

Application No. : 10/749,325  
Filed : December 29, 2003

REMARKS

Claims 1 – 37 were pending in the application. By this paper, Applicant has canceled Claims 25 – 28 without prejudice, and added new Claims 38-39. Accordingly, Claims 1 – 24 and 29 – 39 are presented for examination herein.

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*Allowed and Allowable Subject Matter*

**Claim 29** – Per page 21 of the Office Action, Claim 29 stands allowed and Claim 12 stands objected to for depending upon a rejected base claim, but would otherwise be allowable if rewritten in independent form.

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*§112 Rejections*

**Claims 9, 21 and 37** – Per page 2 of the Office Action, Claims 9, 21 and 37 each stand rejected as failing to comply with the enablement requirement. Applicant respectfully traverses.

Specifically, Applicant notes that both Claims 9 and 21 comprise original claims in Applicant's disclosure as filed.

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Further, Applicant respectfully submits that the Examiner has the burden of establishing a reasonable basis to question the enablement provided for in Applicant's specification as filed. See e.g. MPEP § 2164.04. In fact the only basis provided for by the Examiner is that the "Examiner is unable to find any relevant support for this limitation in the Applicant's disclosure". As Claims 9 and 21 comprise originally filed claims, Applicant does not believe this statement to be correct. See *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) (the examiner must provide a reasonable explanation as to why the scope of protection provided by a claim is not adequately enabled by the disclosure).

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Applicant submits that it is well known to those of ordinary skill in the relevant art field (e.g., digital communications and bus architecture) what the term "phase amplitude modulation" refers to. To illustrate this point, Applicant respectfully suggests that the Examiner perform an Internet search on the term "phase amplitude modulation" (especially in the context of the exemplary GMII embodiments described in Applicant's specification). See, e.g., the attached IEEE presentation (slide 3) describing 5-level PAM (phase amplitude modulation) as but one such example of the use and general understanding by those of ordinary skill of this term.

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Hence, Applicant submits that not only is the general concept of phase amplitude modulation well within the skill of the ordinary artisan, it is also inherent in certain exemplary embodiments of Applicant's invention (e.g., GMII using 5-level PAM), albeit Applicant's claims are not so limited.

5 The Examiner has respectfully proffered no information which would suggest otherwise, as required by MPEP 2164.04.

Therefore, Applicant respectfully submits that Claims 9, 21 and 37 are in compliance with the enablement requirement of 35 U.S.C. § 112, first paragraph, and that the Section 112 rejections should be withdrawn.

10 *§103 Rejections*

**Claim 1** – Per page 3 of the Office Action, Claim 1 stands rejected under 35 U.S.C. 103 as being unpatentable over Stone et al. (U.S. Pub. No. 2002/0152346, hereinafter “Stone”) in view of Crutchfield et al. (U.S. Pub. No. 2002/0196884, hereinafter “Crutchfield”). Applicant respectfully traverses the Examiner's contention and notes that: (i) neither Stone nor Crutchfield appear to teach each and every limitation present within Applicant's Claim 1 invention; and alternatively, (ii) that Crutchfield's combination with Stone, in the manner prescribed by the Examiner, is impermissible hindsight.

15 Firstly, Applicant submits that neither Stone nor Crutchfield appear to teach or suggest a “FIFO” as alleged by the Examiner in the context of that disclosure (a “buffer” is referred to in Crutchfield's discussion of the prior art). Applicant respectfully requests that the Examiner point to and provide support for the Examiner's contention that Stone or Crutchfield teach or suggest a “FIFO” as Applicant has claimed.

25 Further, The Examiner admits that Stone fails to teach “*generating a 10-bit symbol, scrambling the 10-bit symbol, encoding the 10-bit symbol, and deriving an 8-bit byte from the removed 10-bit symbol*”. The Examiner alleges that Crutchfield teaches such steps for “*generating*”, “*encoding*” and “*deriving*”. However, Applicant has claimed “*generating a 10-bit symbol on an IEEE 1394-compliant PHY*” and “*sending the [derived] 8-bit byte to an IEEE 802.3 compliant PHY*”. It is these claimed method steps, in combination with the others recited, that Applicant submits distinguishes over the prior art. Crutchfield appears to be only concerned with IEEE 1394 communication and hence, not only do Crutchfield and Stone not teach each and

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every limitation as set forth in Applicant's Claim 1 invention, it is Applicant's position that there simply would be no suggestion or motivation to combine the references in a manner that would render obvious Applicant's claimed invention.

5           **Claim 10** – Per page 6 of the Office Action, Claim 10 stands rejected under 35 U.S.C. 103 as being unpatentable over Stone, Crutchfield, Tatum et al. (U.S. Patent No. 6,728,280, hereinafter "Tatum"), Thayer et al. (U.S. Patent No. 5,590,378, hereinafter "Thayer") and Anderson et al. (U.S. Patent No. 5,845,152, hereinafter "Anderson").

10           Applicant respectfully traverses the Examiner's contention and notes that, as discussed above, neither Stone nor Crutchfield appear to teach or suggest a "*FIFO*" as alleged by the Examiner at page 6, line 116 through page 7, line 120 of the Office Action. Applicant respectfully requests that the Examiner point to and provide support for the Examiner's contention that Stone or Crutchfield teach or suggest a "*FIFO*" as Applicant has claimed.

15           Secondly, the Examiner admits that Thayer does not expressly teach "*assembling a 10-bit symbol from an 8-bit byte stored in a first register and 2 bits in a second register*" but does show a "*24-bit symbol can be assembled from 3 8-bit symbols*". The Examiner notes that Figures 11A – 11G of Thayer "*would provide sufficient teaching for one of ordinary skill in this art to develop other permutations*". Without discussing the propriety of what the Examiner alleges Thayer teaches, it is unclear to Applicant where the motivation exists that would result in one of  
20           ordinary skill modifying the teachings of Thayer in order to derive Applicant's claimed limitations. Per MPEP § 2143.01, the "*fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish prima facie obviousness*" {emphasis added}. Applicant submits that the Examiner's modification of the teachings of Thayer in this way, absent any implicit or explicit motivation to do so, is improper.

25           Thirdly, Applicant traverses the Examiner's modification of the teachings of Stone and Crutchfield with the teachings of Thayer. The Examiner alleges one of ordinary skill would have been motivated to incorporate the data alignment as taught by Thayer into the method of Stone and Crutchfield for the purpose of improving performance. It is unclear to Applicant why the inventions of Stone and Crutchfield would benefit from the Thayer data alignment. The  
30           motivation proffered by the Examiner appears solely applicable to the Thayer invention, and its interrelation with the inventions of Stone and Crutchfield is, in Applicant's view, wholly unclear.

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Applicant submits that the standard applied by the Examiner is improper as the prior art itself must suggest the desirability of the combination or modification. See e.g. *In re Mills*, 916 F. 2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990); and MPEP § 2143.01.

5 Fourthly, the Examiner alleges that Anderson teaches “*a third clock*” and a “*second FIFO*”. While Applicant admits that Anderson teaches, *inter alia*, “*a method for the loading and unloading of a FIFO in an isochronous transmission mechanism*” and a clock generally, it is not at all clear how the FIFO in Anderson comprises a “*second FIFO*” and a “*third clock*” when combined with the teachings of Stone, Crutchfield and Thayer. Applicant respectfully requests clarification as to the logic behind the modification of the Stone, Crutchfield, Thayer inventions  
10 with the teaching of Anderson.

**Claim 13** – Per page 10 of the Office Action, Claim 13 stands rejected under 35 U.S.C. 103 as being unpatentable over Stone in view of Crutchfield. Applicant respectfully traverses the Examiner’s contention and notes that, as previously discussed, neither Stone nor Crutchfield  
15 appear to teach each and every limitation present within Applicant’s Claim 13 invention. Firstly, Applicant submits that neither Stone nor Crutchfield appear to teach or suggest a “*FIFO*” as alleged by the Examiner. Applicant respectfully requests that the Examiner point to and provide support for the Examiner’s contention that Stone or Crutchfield teach or suggest a “*FIFO*” as Applicant has claimed.

20 Secondly, the Examiner admits that Stone fails to teach “*flagged encoding the 10-bit symbol*”. The Examiner then alleges that Crutchfield teaches such flagged encoding. Applicant traverses the Examiner’s contention that Crutchfield teaches such flagged encoding. Applicant respectfully requests the Examiner point to where Crutchfield teaches what the Examiner alleges.

Further, The Examiner admits that Stone fails to teach “*generating a 10-bit symbol*” and  
25 “*deriving an 8-bit byte from the removed 10-bit symbol*”. The Examiner alleges that Crutchfield teaches such steps for “*generating*”, and “*deriving*”. However, Applicant has claimed “*generating a 10-bit symbol on an IEEE 1394-compliant PHY*” and “*sending the [derived] 8-bit byte to an IEEE 802.3 compliant PHY*”. It is these claimed method steps, among others, that Applicant submits distinguishes over the prior art. Crutchfield appears to be only concerned with  
30 IEEE 1394 communication and hence it is Applicant’s position that there simply would be no

motivation to combine the references in a manner that would render obvious Applicant's claimed invention.

**Claim 22** – Per page 14 of the Office Action, Claim 22 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Stone in view of Crutchfield and further in view of Thayer. Applicant respectfully traverses the Examiner's contention and notes that Stone does not appear to teach or suggest a "FIFO" as alleged by the Examiner at page 15, lines 295 – 297 of the Office Action. Applicant respectfully requests that the Examiner point to and provide support for the Examiner's contention that Stone teaches or suggests a "FIFO" as Applicant has claimed.

Secondly, the Examiner admits that Thayer does not expressly teach "*assembling a 10-bit symbol from an 8-bit byte stored in a first register and 2 bits in a second register*" but does show a "*24-bit symbol can be assembled from 3 8-bit symbols*". The Examiner asserts that Figures 11A – 11G of Thayer "*would provide sufficient teaching for one of ordinary skill in this art to develop other permutations*".

Without discussing the propriety of what the Examiner alleges Thayer teaches, it is unclear to Applicant where the motivation exists that would result in one of ordinary skill modifying the teachings of Thayer in order to derive Applicant's claimed limitations. Per MPEP § 2143.01, the "*fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish prima facie obviousness*" {emphasis added}.

Applicant submits that the Examiner's modification of the teachings of Thayer in this way, absent any implicit or explicit motivation to do so, is improper.

Thirdly, Applicant traverses the Examiner's modification of the teachings of Stone and Crutchfield with the teachings of Thayer. The Examiner alleges one of ordinary skill would have been motivated to incorporate the data alignment as taught by Thayer into the method of Stone and Crutchfield for the purpose of improving performance. It is unclear to Applicant why the inventions of Stone and Crutchfield would benefit from the Thayer data alignment. The motivation proffered by the Examiner appears solely applicable to the Thayer invention and its interrelation with the inventions of Stone and Crutchfield is, in Applicant's view, wholly unclear. Applicant submits that the standard applied by the Examiner is improper as the prior art itself must suggest the desirability of the combination or modification. See e.g. *In re Mills*, 916 F. 2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990); and MPEP § 2143.01.

Claims 25 – 28 – Per pages 17 – 20 of the Office Action, Claims 25 – 28 each stand rejected under 35 U.S.C. 103(a). By this paper, Applicant has canceled Claims 25 – 28 without prejudice, thereby rendering the Examiner’s rejection of these claims moot.

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Claims 30 and 33 – Per page 21 of the Office Action, Claims 30 and 33 appear to stand rejected under 35 U.S.C. 103(a) as being unpatentable over Stone in view of Crutchfield, and in further view of Tatum, Thayer and Anderson.

With regards to Claim 30, the Examiner appears to allege that Anderson teaches “a third clock” and a “second buffer”. While Applicant admits that Anderson teaches, *inter alia*, “a method for the loading and unloading of a FIFO in an isochronous transmission mechanism” it is not at all clear how the teachings in Anderson comprises a “second buffer” and a “third clock” when combined with the teachings of Stone, Crutchfield, and Thayer. Applicant respectfully requests clarification as to the motivation or suggestion for modifying the Stone, Crutchfield, Thayer inventions with the teaching of Anderson in order to render obvious Applicant’s Claim 30 invention, as required for any *prima facie* case of obviousness.

With regards to Claim 33, Applicant submits that none of Stone, Crutchfield, Tatum, Thayer and Anderson teach or suggest, *inter alia*, “deriving a multi-bit byte from the scrambled symbol; and sending the multi-bit byte to a second physical interface, the second interface utilizing a different communication protocol than the first interface”. While Stone individually teaches IEEE 1394 and IEEE 802.3 interfaces and Thayer teaches data realignment, it is not at all clear to Applicant how the Stone or Thayer references suggest the desirability of their combination with one another in order to render obvious Applicant’s Claim 33 invention. Applicant respectfully requests that the Examiner provide specific support for the conclusion that the above identified references teaches or suggests the above-cited limitation.

#### *New Claims*

Claim 38 – Applicant herein submits newly added Claim 38. New Claim 38 relates generally to objected-to Claim 12, including all those limitations, whether direct or indirect, upon which Claim 12 depends. As noted by the Examiner at page 21 of the Office Action, Claim 12

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would be allowable if rewritten in independent form, hence Applicant submits that newly added Claim 38 is therefore in condition for allowance.

**Claim 39** - New Claim 39 is directed generally to the subject matter of Claim 38.

5 Applicant submits that newly added Claim 39 is therefore in condition for allowance as well.

*Other Remarks*

10 Applicant hereby specifically reserves all rights of appeal (including those under the Pilot Appeal Brief Program), as well as the right to prosecute claims of different scope in another continuation or divisional application.

15 Applicant notes that any claim cancellations or additions made herein are made solely for the purposes of more clearly and particularly describing and claiming the invention, and not for purposes of overcoming art or for patentability. The Examiner should infer no (i) adoption of a position with respect to patentability, (ii) change in the Applicant's position with respect to any claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Examiner, based on such cancellations or additions.


Furthermore, any remarks made with respect to a given claim or claims are limited solely to such claim or claims.

20 If the Examiner has any questions or comments which may be resolved over the telephone, he is requested to call the undersigned at (858) 675-1670.

Respectfully submitted,

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